



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/055,315	10/29/2001	Yoshinori Ohtsuka	3531.65937	7965

7590 06/16/2004

Patrick G. Burns, Esq.
GREER, BURNS & CRAIN, LTD.
Suite 2500
300 South Wacker Dr.
Chicago, IL 60606

EXAMINER

TUGBANG, ANTHONY D

ART UNIT	PAPER NUMBER
----------	--------------

3729

DATE MAILED: 06/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/055,315

Applicant(s)

OHTSUKA, YOSHINORI

Examiner

A. Dexter Tugbang

Art Unit

3729

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) 7 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>10/29/01</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of the invention of Group I, Claims 1-6 in the reply filed on 3/12/04 is acknowledged. The traversal is on the ground(s) that it would not place any burden on the examiner to examine both of the inventions of Groups I and II. This is not found persuasive because the invention of Group II belongs to a completely different statutory class of inventions, i.e. product. Considering this aspect as well as the structure of Group II is not in anyway limited to the process steps recited in Group I, the searches would be non-extensive requiring two completely different lines of patentability, the application of different art, and even different case law. All of these factors taken into consideration would place a severe burden on the examiner to examine both of the inventions of Groups I and II.

The requirement is still deemed proper and is therefore made FINAL.

2. Claim 7 has been withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 3/12/04.

Specification

3. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

Art Unit: 3729

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

4. The abstract of the disclosure is objected to because ^{the abstract} uses language that is already implied, i.e. "The present invention..." (line 3 on page 31 of the specification). Correction is required. See MPEP § 608.01(b).

Claim Objections

5. Claim 1 is objected to because of the following informalities: the phrase of "and said magnetic block...substantially" (line 10) is awkwardly worded and would be more favorably considered if the phrase included a comma, --,--, after the phrase of "magnetic block" (line 10). Appropriate correction is required.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1-6 are rejected under 35 U.S.C. 102(e) as being anticipated by Shen et al 5,996,213.

Shen discloses a process of fabricating a thin-film magnetic head comprising: forming a lower pole 204 having a substantially flat upper surface; forming a non-magnetic layer

Art Unit: 3729

(protection layer 206 in Fig. 4a) on the upper surface of the lower pole; forming a magnetic block (pole tip 314 and Hbsat layer 312 in Fig. 4f) on the non-magnetic layer; etching at least the non-magnetic layer 206 using the magnetic block 312, 314 as a mask to form between the lower pole and the non-magnetic block, a gap layer 210 having substantially the same width as the width of the magnetic block (see sequence of Figs. 4e-4f and col. 6, lines 17-22); forming an insulation layer 318 in a predetermined thickness on the lower magnetic pole so as to cover the gap layer and the magnetic block (see Fig. 4g); polishing the insulation layer 318 and the magnetic block 312, 314 using an upper surface of the insulation layer corresponding to an edge portion (top raised surface of layer 204) of the lower pole as a polishing top surface to form an upper sub-pole 320; and forming on the upper sub-pole 320, an upper pole 324 wider than the upper sub pole (see Fig. 4j).

It is noted that the “edge portion” of the lower pole is read as the raised top surface of layer 204 and is considered to be a “polishing stop surface” because the insulation layer 318 of Shen is polished to achieve a certain thickness between the top surface of the insulation layer 318 and the top raised surface of the lower pole layer 204 (as shown in Fig. 4h).

Regarding Claim(s) 2 and 3, Shen further teaches a step of, forming around the lower pole 204, a polishing stop pattern (pedestal 206) for providing the polishing stop surface in which this polishing stop surface is considered to be “a plurality of patterns” because the top surfaces of lower pole include one pattern at a top raised surface and another pattern at a lower surface within the pedestal 206.

Art Unit: 3729

Regarding Claim(s) 4, Shen further teaches that the entire manufacturing process, inclusive of the polishing stop pattern, provides a terminal (lead connects 205) capable of connecting the thin-film magnetic head to an external circuit.

Regarding Claim(s) 5, Shen further teaches within the step of forming the gap layer 210, a step of etching a part of the lower pole 204 using the magnetic block 312, 314 and the gap layer 210 as a mask, whereby a lower sub-pole (projection of 204 from location of pedestal 206) is formed as one body with the lower pole (see sequence of Figs. 4e-4f).

Regarding Claim(s) 6, Shen further teaches forming a magneto-resistance effect element 202 on a lower shield (S1, layer 200 in Fig. 4j) where the lower pole is provided with an upper shield (P1/S2, see col. 5, lines 54-56) opposed to the lower shield 200 with the magnetic-resistance effect element 202 therebetween.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to A. Dexter Tugbang whose telephone number is 703-308-7599. The examiner can normally be reached on Monday - Friday 7:00 am - 3:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on 703-308-1789. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 3729

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'A. Dexter Tugbang', is written over the printed name.

A. Dexter Tugbang
Primary Examiner
Art Unit 3729

June 14, 2004